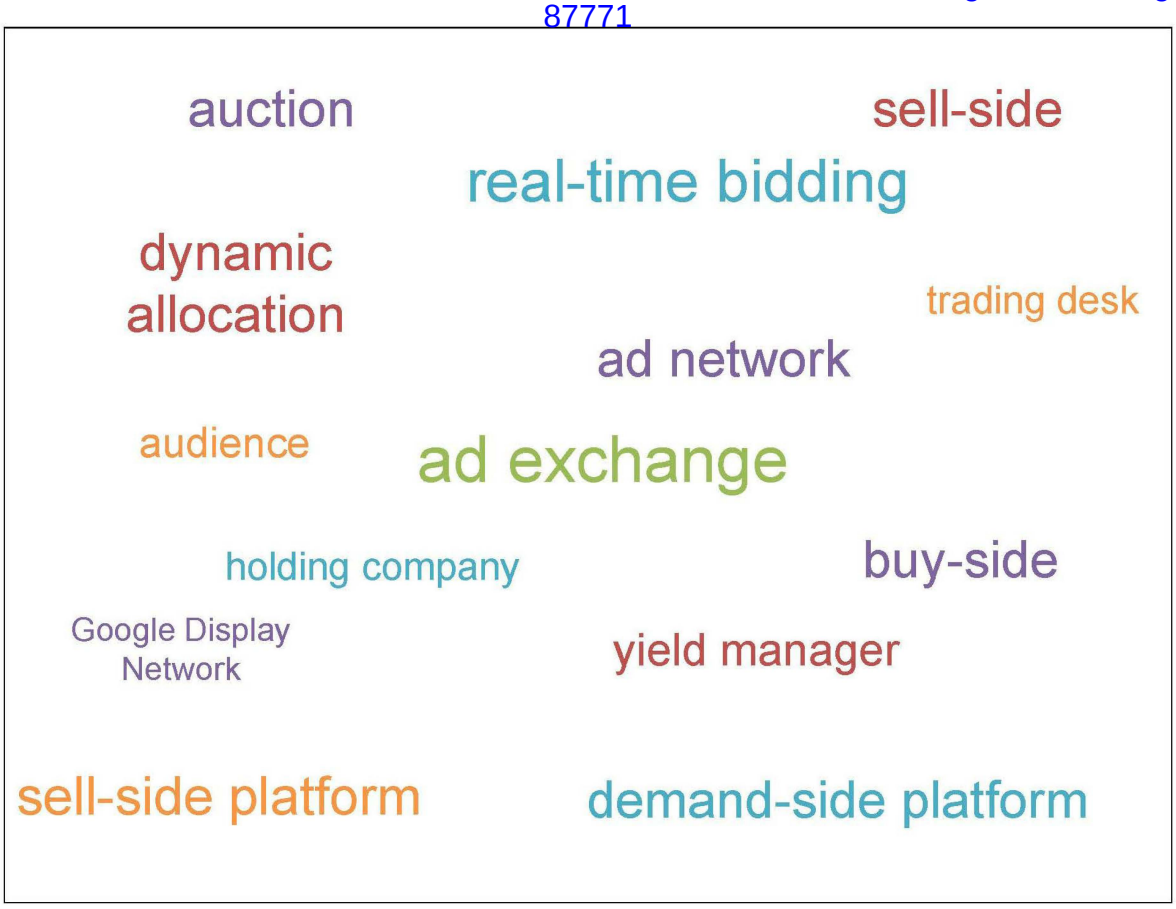
# Plaintiffs' Exhibit 20

doubleclick
ad exchange by Google
Display Ecosystem
Boot Camp

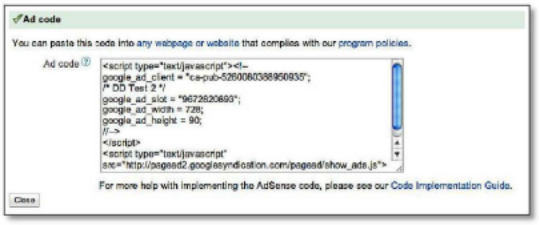

auction
sell-side
real-time bidding
dynamic allocation
trading desk
ad network
audience
ad exchange
holding company
buy-side
Google Display Network
yield manager
sell-side platform
demand-side platform

# What about the publishers?

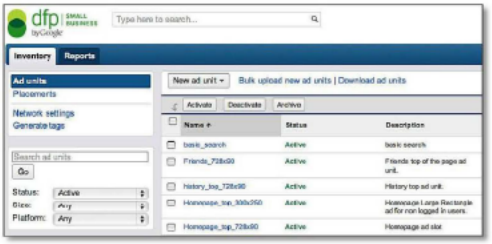
1. Create an ad unit in AdX.

728x90
blocked: ford.com
Run of Site, above-the-fold

2. Get the code for the ad unit




3. Add the code to your site, or into an ad server like DFP.



# Publisher Benefits: Anonymity

- Publishers can set their inventory to be **anonymous**, so they can protect their direct sales channel efforts (i.e. the advertisers who are buying directly won't know they can get the same inventory for cheaper on the exchange).

**sales channel conflict**: The risk that advertisers who buy directly from publishers can get the same inventory for cheaper through other channels

- Publishers can also choose to make their inventory **anonymous unless the advertiser is bidding at least a certain CPM**. In this case, they'd set a low min CPM for anonymous, and a higher one for branded.

# Quiz!

What's a trading desk?

A division at an agency holding company designated to manage exchange buying for all of the holding company's agencies

Google Confidential and Proprietary

# Publisher Benefits: Dynamic Allocation

dfp by Google

| Priority | Advertiser | Impression goal/weight | CPM | Dates |
|---|---|---|---|---|
| 4 | Golden Airlines | 50% | $30 | 15 days |
| 4 | Custer Car Rental | 25% | $10 | 60 days |
| 8 | Happy Pet Care | 500,000 | $4 | 30 days |
| 8 | YumBurger | 10,000 | $5 | 30 days |
| 10 | Ad Exchange | remnant | auction | indefinitely |
| 12 | Yield Manager A | remnant | $4 | indefinitely |
| 12 | Yield Manager B | remnant | $3 | indefinitely |
| 12 | Network X | remnant | $2 | indefinitely |
| 16 | house ads | remnant | $0 | indefinitely |

**Guaranteed inventory:** Directly-booked deals with impression goals and campaign flight dates

**Remnant/Preemptible inventory:** Ad networks, yield managers, and other remnant solutions

**dynamic allocation**: A yield maximization feature within DFP which dictates that an AdX ad only serves if the price – calculated in real time – can beat the sources prioritized below it.

# Dynamic Allocation: How it works

- DFP goes through its normal ad selection process, ignoring Ad Exchange for now
- If it selects an ad booked at a priority at or below AdX, an AdX auction is triggered
- AdX returns the actual price paid to the seller (second-price minus rev share), which is compared to the selected ad's price
- DFP serves whichever ad will pay more.

dfp by Google

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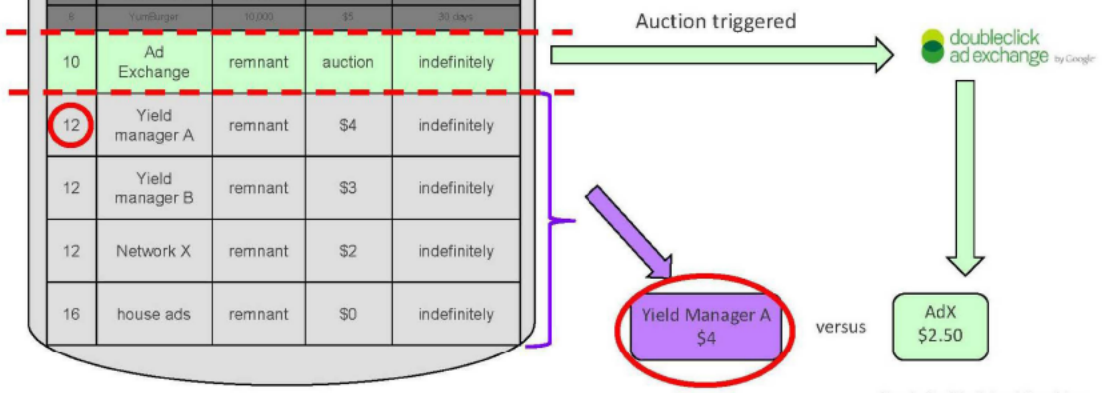


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# Putting it all together

1 User enters espn.com into her browser.

2 The browser contacts ESPN's **web server** for the website information.

3 As the browser begins to build the page content, it encounters a URL, or **publisher ad tag**, which tells it to call ESPN's ad server.

# Putting it all together

4 The browser contacts ESPN's ad server (in this case, DFP) asking it for an ad.

Which advertisers are targeting where this user is located?
Which ad will make us the most money?
Which ads are behind schedule?

5

In this case, DFP contains – among other advertiser creatives and ad tags – an ad exchange tag. As usual, DFP selects the ad that should show.

6 Because there is an AdX tag booked above http://yieldmanager.com, an AdX auction is triggered.

# Putting it all together

7 AdWords runs its auction, and selects its two highest bidders. Meanwhile, AdX sends a "callout" to its real-time bidders. It also scans through its eligible UI campaigns. Eventually, the AdX UI campaigns, AdX real-time bids, and two highest AdWords bids enter the AdX auction.

8 The AdX auction takes place. The highest bidder is chosen as the winner, and the second-highest price is noted.

# Putting it all together

9 AdX sends the price paid by the winner – the second price minus the rev share – to see if it can beat the http://yieldmanager.com price.

10

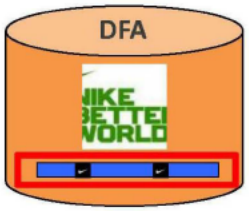
If AdX can beat the price, AdX sends the winning ad creative – or ad tag – back to the browser. Usually, it's an ad tag.

# Putting it all together

11 Now, the browser sees another link, so it calls DFA.

chrome

12




13 DFA returns the chosen creative, which appears on the user's screen.

DFA knows it needs a Nike ad. But which one? Which one will speak to someone on ESPN.com that lives in Nebraska?